R9510

REED INSTRUMENTS

Digital Refractometer

WARRANTY 1 YEAR WARRANTY

Instruction Manual

REED Instruments
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Introduction

Thank you for purchasing your REED R9510 Digital Refractometer. Please read the following instructions carefully before using your instrument. By following the steps outlined in this manual your meter will provide years of reliable service.

Product Quality

This product has been manufactured in an ISO9001 facility and has been calibrated during the manufacturing process to meet stated product specifications. If a certificate of calibration is required please contact the nearest authorized REED distributor or authorized Service Center. Please note an additional fee for this service will apply.

Safety

- Never attempt to repair or modify your instrument. Dismantling your product may cause damage that will not be covered under the manufacturer's warranty. Servicing should only be provided by an authorized service center.
- When the unit needs to be washed, use water at a temperature not exceeding 86°F (30°C).
- The prism must be cleaned thoroughly with a soft, clean damp cloth after each use—failure to do so will result in inaccurate readings and possible long term damage.
- Do not drop or use excessive force as it may result in damage to the meter.
- Do not scratch the prism surface.
- Do not leave the instrument in a location exposed to direct sunlight or near a heat source for an extended period of time.
- Do not attempt to measure corrosive chemicals as it will damage the instrument.

Features

- 0 to 55% Brix measurement range with 0.1% resolution
- Ergonomically designed for one-handed operation
- Dual LCD simultaneously displays % Brix and temperature
- Sapphire prism with abrasion and corrosion-resistant coating
- Automatic Temperature Compensation (ATC)
- Built-in Zero calibration
- Rechargeable battery

Included

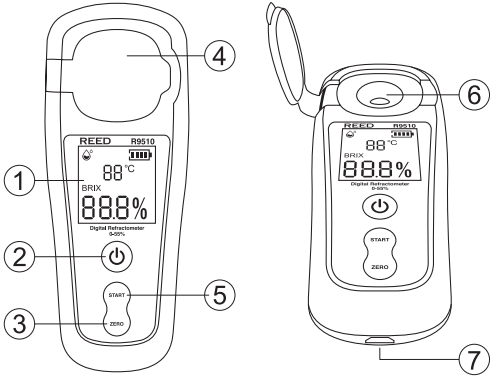
- Digital Refractometer
- USB Cable
- Cleaning cloth
- Solution/Sample applicator

Specifications

Measurement Range:	Brix: 0 to 55% Temperature: 50 to 104°F (10 to 40°C)
Resolution:	Brix: 0.1% Temperature: 1°F (1°C)
Accuracy:	Brix: ±0.2% Temperature: ±1°F (1°C)
Temperature Compensation Range:	50 to 104°F (10 to 40°C)
Sample Volume:	0.3mL
Measurement Time:	3 seconds
Auto Shut-off:	2 minutes
Power Supply:	750mAh rechargeable Li-ion battery
Battery Life:	40 hours
Charge Time:	3.5 hours
Product Certifications:	CE, IP54
Dimensions:	5.5 x 2.2 x 1.38" (140 x 55 x 35mm)
Weight:	0.19lbs (84g)

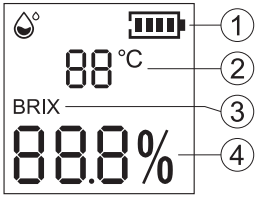
Instrument Description

1. LCD Display
2. Power Button
3. **ZERO** Button
4. Protective Cover
5. **START** Button
6. Sample Well
7. USB Interface



Display Description

1. Battery Status Indicator
2. Temperature Measurement Reading
3. % Brix Measurement Mode Indicator
4. % Brix Measurement Reading



Operating Instructions

Power ON/OFF

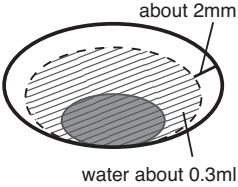
Turn the meter ON or OFF by holding down the Power button for approximately 2 seconds.

Zero Calibration

Before each use, perform a Zero calibration. The temperature of the distilled or tap water used for zero calibration should be the same as the ambient temperature. If the temperature is different, allow the water to adjust to the ambient temperature before performing a zero calibration.

Be sure that the measuring surface and well are clean as outlined under the "*Sample Well Maintenance*" section.

1. Apply distilled water (minimum of 0.3ml) to the sample well as shown below.



2. When ready, close the protective cover and press the **ZERO** button twice to enter zero calibration mode.
3. A series of dashes (– – –) will appear on the display followed by 0.0% Brix which confirms that the zero calibration was successful.
4. The R9510 is now ready to use.

Measuring Procedure

1. Inspect the sample well to be sure that there is no residue remaining from a previous measurement/calibration. If the sample well does not appear to be clean, do not take a measurement and refer to the "*Sample Well Maintenance*" section for details.

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2. Apply the measuring liquid to the sample well (minimum of 0.3ml).

Note: For accurate measurements, it is recommended to completely cover the sample well surface.

The temperature of the measuring liquid should be the same as the ambient temperature. If the temperature is different, allow the liquid to adjust to the ambient temperature before taking a measurement.

3. When ready, close the protective cover and press the **START** button to take a measurement.
4. A series of dashes (– – –) will appear on the display followed by the measured Brix value (%) and the temperature value of the liquid sample.
5. Remove the liquid sample by wiping it off with a tissue properly clean the sample well as highlighted in the "*Sample Well Maintenance*" section.

Auto Power Off

To preserve battery life, the meter is programmed to turn off after approximately 2 minutes of inactivity.

Sample Well Maintenance

Cleaning of the sample well should be performed immediately after each sample reading. Never immerse the meter in any liquid. When the sample well has been completely cleaned no residue should be present.

To properly clean the sample well use Isopropyl Alcohol followed by a distilled water rinse and then thoroughly dry with the included cleaning cloth, a residue free cloth or delicate task wipes.

Charging the Battery

1. Connect the R9510 via the included cable to a USB port on your PC or into a wall outlet using a USB Power Adapter (not included) to charge the Li-ion battery.

Note: The meter must remain powered off to properly charge via the USB port on your PC.

2. Charge the meter until the battery indicator appears full and remove the charging cable when done.

Error Codes

Code	Description
ERR1	Re-calibrate with distilled water.
ERR2	Measuring liquid exceeds the % Brix measuring range.
ERR3	No/inadequate measuring liquid present. Add measuring liquid.
ERR4	Incorrect measuring liquid used.

Applications

- Fruit and citrus industry
- Juice factories
- Vineyards
- Food preparation
- Consumer use
- Agriculture

Accessories and Replacement Parts

- **CA-52A** Soft Carrying Case

Don't see your part listed here? For a complete list of all accessories and replacement parts visit your product page on www.REEDInstruments.com.

Product Care

To keep your instrument in good working order we recommend the following:

- Store your product in a clean, dry place.
- Charge the battery as needed.
- Clean your product with biodegradable cleaner. Do not spray the cleaner directly on the instrument. Use on external parts only.

Product Warranty

REED Instruments guarantees this instrument to be free of defects in material or workmanship for a period of one (1) year from date of shipment. During the warranty period, REED Instruments will repair or replace, at no charge, products or parts of a product that proves to be defective because of improper material or workmanship, under normal use and maintenance. REED Instruments total liability is limited to repair or replacement of the product. REED Instruments shall not be liable for damages to goods, property, or persons due to improper use or through attempts to utilize the instrument under conditions which exceed the designed capabilities. In order to begin the warranty service process, please contact us by phone at 1-877-849-2127 or by email at info@reedinstruments.com to discuss the claim and determine the appropriate steps to process the warranty.

Product Disposal and Recycling

Please follow local laws and regulations when disposing or recycling your instrument. Your product contains electronic components and must be disposed of separately from standard waste products.

Product Support

If you have any questions on your product, please contact your authorized REED distributor or REED Instruments Customer Service by phone at 1-877-849-2127 or by email at info@reedinstruments.com.

Please visit **www.REEDInstruments.com** for the most up-to-date manuals, datasheets, product guides and software.

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